

# EMS and FIRE Quick Reference Guide for RAD-57

## Noninvasive Measurement of Carboxyhemoglobin (carbon monoxide poisoning)

### When To Use The RAD-57:

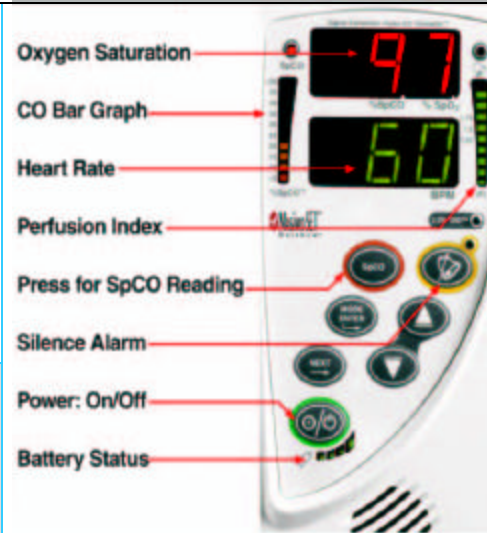
- Post-incident firefighter screening on all fires
- Firefighter rehabilitation
- Extended time on or near fire-ground
- Multiple SCBA bottle use
- Multi-patient presentation
- Headache, dizziness, syncope, weakness, ALOC
- Shortness of breath, chest pain
- Nausea, abdominal complaints
- Any ill or injured patient with vague complaints

### Operating The RAD-57:

- Press on/off button
- Place probe on patient finger
  - Wire from probe should be on top of finger
  - Do not force finger into probe too far
  - Finger should be clean, warm and dry
  - Use 2nd, 3rd or 4th digit, no thumb or little finger
- Device will take 6 – 10 seconds to calibrate (you will see zeros)
- Device will display pulse rate and SpO<sub>2</sub>
- Press SpCO button to display carboxyhemoglobin %
- Display will return to pulse rate and SpO<sub>2</sub> in 10 seconds

### Understanding The Readings of The RAD-57:

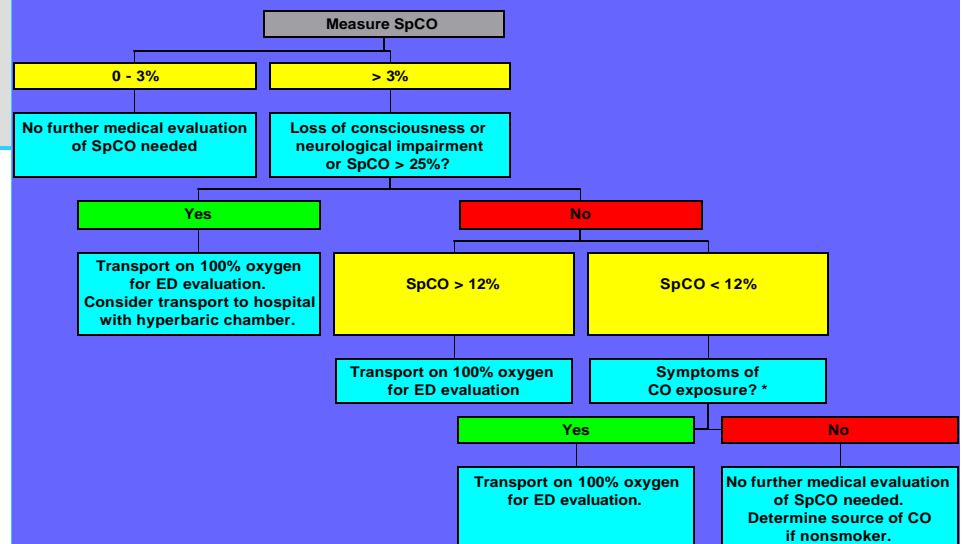
- Pulse Rate and SpO<sub>2</sub> (saturation): follow EMS guidelines
- SpCO (carboxyhemoglobin):
  - 0-3 %** Normal, no treatment required
  - 3-12%.** PLUS signs & symptoms or history of exposure -TREAT
  - 3-12% -** no signs of symptoms, no history of exposure-OBSERVE
  - 12% and above:** TREAT and TRANSPORT
- Treatment: 100% oxygen by NRB mask, transport to hospital
- **>25% in adults**, consider hyperbaric center
- **>15% in pediatrics** consider hyperbaric center
- **>15% in pregnant females** consider hyperbaric center



### SpCO Display

CO Bar Graph: 0-10% Green, 10-20% Yellow, 20 > Red

### EMS SpCO Triage Algorithm



Not intended as a substitute for the Operators Manual. Always follow all local EMS policies and procedures. Always consult your Medical Director prior to using any new device. This guide is not intended to substitute for local or department guidelines. SpCO Triage Algorithm and "When to use" and "Understanding the Readings" Referenced from "Lethal Exposure, Carbon Monoxide Presents A Toxic Hazard For First Responders." An exclusive supplement to JEMS, FireRescue Magazine and Wildland Firefighter sponsored by Masimo Corp, Spring 2006 and published by Elsevier Public Safety, 525 B St. San Diego, CA 92101-4495; 800-266-5367. Copyright 2006. Masimo Corporation, 40 Parker, Irvine, CA 92618, www.masimo.com, 800-257-3810.